

جمهورية مصر العربية



وزارة التربية والتعليم
والتعليم الفني

نموذج إجابة

امتحان شهادة إتمام الدراسة الثانوية العامة

للعام الدراسي ٢٠١٧/٢٠١٦ - الدور الأول

المادة : الجيولوجيا (باللغة الانجليزية)

نموذج

أ

1-

(1 mark)

A- 1- the fault plane is polished, sometimes with lines parallel to the rocks movement.

2- the presence of a fault breccia.

3- hot springs.

4- mineral deposition along fault planes.

(p. 16) G₁

(any two evidences)

OR

B- 1- presence of rounded conglomerates lie directly above the surface of unconformity.

2- sudden change in the sequence of fossil contents between the layers.

3- difference in the inclination of strata on both sides of the surface of unconformity.

4- the presence of geological structures or dykes in layers and absent from overlying layers.

(p. 19) G₁

2-

(1 mark)

A- amethyst and rock crystal are two shapes of quartz so their streak is white

(p. 28) G₂

OR

B- The talc gets scratched by gypsum.

(p. 29) G₂

3-

(1 mark)

A- absorbs light where the chloroplasts carry out photosynthesis, light energy is converted to chemical energy. (p.99) E₁

OR

B- protect the plant from losing water by evaporation due to the scarce water in the desert. (p. 11) E1

4-

(1 mark)

(c) - the hardest mineral

(p. 29) G2

5-

(1 mark)

olivine is the first mineral to crystallizes at more than 1100°C while the granite minerals crystallize at temperature less than 800°C. (p. 40) G3

6-

(1 mark)

stalagmites

(p. 86) G5

7-

(2 × 1 = 2 marks)

P . O . C	renewable resources	non - renewable resources
Definition	resources are constantly available in the biosphere due to its ability for continuity and renewing unless man causes its extinction or depletion. (½ mark)	temporary resources that will disappear from the environment sooner or later. (½ mark)
example	plants, animals, water, air & soil. (½ mark) (p. 115) E ₂	oil, coal, natural gas & minerals. (½ mark)

8-

(2 marks) (p. 61) G4

a- 3

(½ mark)

b- (3) (½ mark)-

(4) (½ mark)

c- tension force.

(½ mark)

9-

(2 × 1 = 2 marks)

During plant growth, it passes through two stages.

- vegetative growth stage: in it embryo cells divide during seed germination where the root, stem of leaves are formed.

(1 mark)

- The flowering and fruiting stage when plant forms flowers & fruit

(1 mark) (p. 100) E₁

10-

(1 mark)

A- due to the abundance of giant reptiles in this period.

(p. 18) G₁

B- because it consists of olivine, pyroxene and some amphibole which are rich in dark ferro-magnesium minerals - also it is poor in the light toned silica.

(p. 41) G3

11-

(1 mark)

- They revert to aestivation (summerlaziness)

(p. 103) E1

12-

(1 mark)

a- Rhyolite

(p. 41) G3

13-

(1 mark)

index fossil

(p. 17) G1

14-

(1 mark)

- Removal of the upper layer of the soil to use it in brick manufacturing.

(p. 117) E2

15-

(1 mark)

when small amounts of iron replace zinc in its atomic structure.

(p. 28) G2


16-

(2 × 1 = 2 marks)

A-

Delta	Dry Delta
<ul style="list-style-type: none"> - when rivers joined with seas and lakes, the load of sediments that the river carry will be deposited. - in order to be done the sea must has no opposing currents. <p>(p. 83) G5</p>	<p>sedimentation begins with boulders and large granules at the outlet area of the canyon and depositing load at the stream mouth in desert</p> <p>(p. 79) G5</p>

B-

River youth stage	River old stage
<ul style="list-style-type: none"> - formation of lakes and water falls & appearance of river capture. - the cross section V - shaped <p>(p. 84) G5 (1 mark)</p>	<ul style="list-style-type: none"> - area of river stream is called the flatplain. - the cross section like a shape of an arc  <p>(1 mark)</p>

17-

(2 × 1 = 2 marks)

A- established the isostatic equilibrium theory (p. 54) G4

b- designed the scale of hardness, (p. 29) G2

18-

(2 × 1 = 2 marks) (p. 97) E1

a- (4) absorbed light energy (5) dissipated thermal energy.

b- (1) the producer (3) guard of nature.

19-

(1 mark)

a- due to the variation in temperature distribution in mantle
which forms rotational convection currents. (p. 60) G4

Or

b- due to spread of depositional basins with great extension and
small depth, as a result of arid climate and salts deposited.

(p. 53) G4

20-

(1 mark)

a- evidence that there was a connection between these continents
that became separated later by continental drift. (p. 59) G₄

OR

b- formation of rich coal deposits (p. 53) G₄

21-

(2 × ½ = 1 mark)

A-

loccoliths	lopoliths
normal dome (p.43) G ₃	inverted dome (p. 44) G ₃

OR

B-

Fault	Joint
fractures or cracks cutting rock masses and accompanid by relative movement of rock masses along both sides of fault plane. (p.14) G1	fractures present in different types of rocks without any evidence of movement (p. 16) G1

22-

(2 × ½ = 1 mark)

a- shale

(p. 48) G₃

b- granite

(p. 49) G₃

23-

(1 mark)

planting a single crop

(p. 116) E₂

24-

(1 mark)

- phosphate and nitrate salts helps in the formation of protein in the cells of marine plants, thus the animals that feed on them flourished so fish flourish as well. (p. 104)E₁

25-

(2 × 1 = 2 marks)

A)

1- normal faults because hanging wall is in a lower position relative to the foot wall.

3- unconformity - angular.

OR

B)

2- anticline - oldest in center (or lower group below unconformity) (or structures).

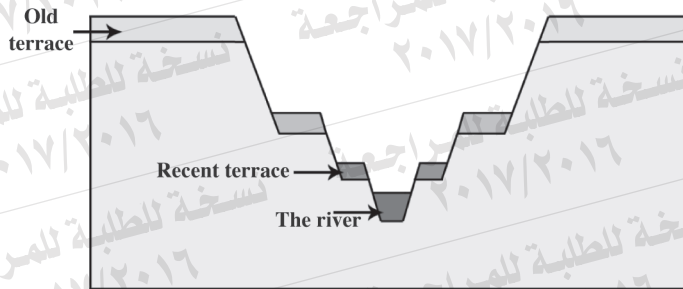
4- graben - two faults share the hanging wall (or upper group above unconformity) (or horizontal beds).

(p. 13, 15, 19) G₁

26-

(2 × 1 = 2 marks)

- with the water level change, so terraces of the river are formed. (1 mark)
- the upper terraces is older than the beneath terraces on the river.



Formation of River Terraces

(1 mark)(p. 82) G₅

27-

(2 × 1 = 2 marks)

- a- its surface separated into successive spheroid shells following the direction of joints known as spheroidal weathering or exfoliation. (p. 73) G₅
- b- the feldspar and mica minerals are decomposed to kaolinite or clay minerals and quartz remain without decomposition.

(p. 75) G 5

28-

(1 mark)

a- the area where life exists

(p. 96) E₁

OR

b- a biological periodic phenomenon which occurs by the movement of certain animal population during certain times or seasons.

(p. 101) E₁

29-

(1 mark) (any 2 points)

- acts as natural filter for carbon dioxide gas, providing us with oxygen gas.

- shedded leaves decompose to humus.

- as wind and torrents breakers.

- shaddow & wood source.

- shelter for wild animals.

(p. 118) E₂

30-

(1 mark)

Tectonic earthquakes

(p. 63) G₄

31-

(1 mark)

due to the increase of evaporation and the reduction in rain or river mouths.

(p. 103) E1

32-

(1 mark)

(d) the liquified upper part of the mantle

(p.9) G₁

33-

(2 marks)

decomposition and decay of carbonate rocks by water rich in dissolved CO_2 .

(p. 74) G₅

34-

(2 marks)

A-

1- sometimes, the change of its minerals to new minerals.

2- the change of its rock texture "becomes more crystallized".

3- the arrangement of its minerals in direction perpendicular to the direction of the effect of the applied pressure.

(p.45) G3

OR

B- a muddy rock rich in hydrocarbons, it is a waxy solid state known as kerogen turns to oil substance when it is heated to about 480°C .

(p.47) G3

35-

(2 × 1 = 2 marks)

Cubic system	Tetragonal system
- has 3 axes	- has 3 axes.
- axes are equal in lengths.	- two axes are equal in length and the third is different.

(p. 26) G₂

36-

(2 × 1 = 2 marks)

a-

1- meander.

4- the main river stream.

b- straighten its path, leaving the arc like lake called exbow lake. (p. 81) G5

37-

(1 mark)

a- feldspar

(p. 28) G₂

OR

b- galena

(p. 30) G₂

38-

(2 × ½ = 1 mark)

- Intensity of it is a specific measurment of the damage results by the earthquake beside the reaction of people by it.

(p. 67) G₄

- its magnitude is the amount of energy released.

39-

(1 mark)

due to meeting of two currents are moving in opposite direction, so sand will deposit at the line of connection of friction between them.

40-

(1 mark)

b- snakes and carnivorous birds

(p. 111) E₁

41-

(1 mark)

plankton

(p. 106) E₁

42-

(1 mark)

b. deposition effect of wind

(p.77) G5

43-

(1 mark)

A-

1-Rationalizing the consumption (drip irrigation or spraying)

2- not squandering water in personal use .

3- Treatment the house used water to irrigate the timber trees.

4- search for ground water suitable for irrigation. and
desalination of sea water.

(p. 121) E₂

OR

B-

1- the establishment of fish farms and crustaceans to provide
proteins.

2- Recycling some secondary industrial wastes to feed animals.

3- recycling the agricultural waste to feed animals. (p. 120) E₂

44-

(4 × ½ = 2 marks)

a- (1) normal faults. (2) normal fault

b-hanging wall down.

c- Graben - Hanging wall of two adjacent fault move down.

d- strike - slip fault - moved horizontally along strikes. (p. 15) G₁

45-

(4 × ½ = 2 marks)

a- Type of rock (1) Igneous (2) sedimentary. (½)

b- Classification (1) plutonic - acidic (2) clastic. (½)

c- example (1) granite (2) conglomerate. (1)